

PERFLUOROALKYL SUBSTITUTED ALKYL CARBOXYLIC ACID

Patent number: JP56169666
 Publication date: 1981-12-26
 Inventor: UMEMOTO TERUO
 Applicant: SAGAMI CHEM RES CENTER
 Classification:
 - international: C07C147/00; C07C149/20; C07C149/40
 - european:
 Application number: JP19800073675 19800603
 Priority number(s):

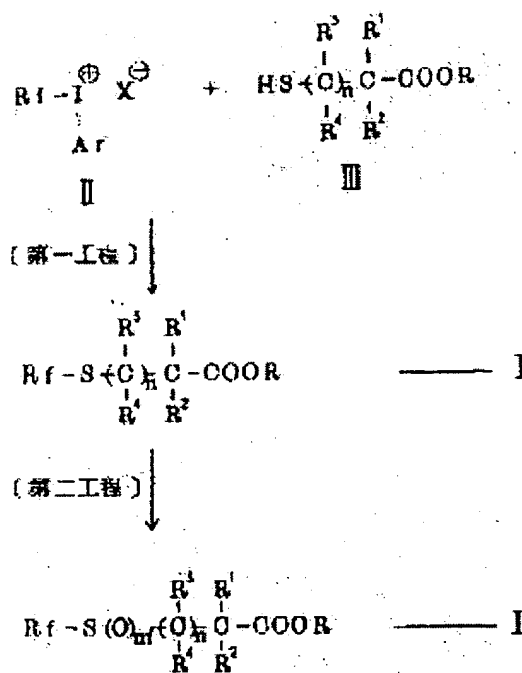
Abstract of JP56169666

NEW MATERIAL: The titled compound of formula I' [Rf is 2-20C perfluoroalkyl; R is H, alkyl or aryl; R<1>, R<2>, R<3> and R<4> are H, (substituted)alkyl or (substituted) aryl; m is an integer 0-2; n is 0 or 1].

EXAMPLE: Heptadecafluoro-n-octylthioacetic acid.

USE: A modifying agent for cephalosporin, a surfactant and a textile treating agent, e.g. capable of giving 7-pentafluoroethylthioacetamido-3- (1-methyl-1H-tetrazol-5-yl) thiomethyl-3-cephem-4-carboxylic acid having an antimicrobial activity against various bacteria.

PROCESS: A compound of formula II (X is halogen, etc.) is reacted with a compound of formula III to give a compound of formula I', which is then oxidized to afford the compound of formula I''.



EV979440227

L9 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1993:170956 CAPLUS

DOCUMENT NUMBER: 118:170956

TITLE: Durable water and oil repellents for textiles

INVENTOR(S): Kamata, Takashi; Ito, Katsuji; Ishida, Mika

PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 04272987	A2	19920929	JP 1991-56126	19910227
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JP 2968365	B2	19991025		
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PRIORITY APPLN. INFO.: JP 1991-56126 19910227

AB The title agents causing no adverse effects on textile strength and handle contain copolymers of polyfluoroalkyl monomers, alkyl (meth)acrylates, and vinyl and/or allyl glycidyl ether. A 70:27.5:2.5 1,1-dihydroperfluorodecyl ***acrylate*** -vinyl chloride-vinyl glycidyl ether copolymer ***emulsion*** was baked on nylon taffeta at 170.degree. for 60 s at wet pickup 30%.

EV979440227

L9 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1993:104762 CAPLUS

DOCUMENT NUMBER: 118:104762

TITLE: Washfast water and oil repellents for textiles

INVENTOR(S): Kamata, Takashi; Ito, Katsuji; Ishida, Mika

PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 04272986	A2	19920929	JP 1991-56125	19910227
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JP 2968364	B2	19991025		
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PRIORITY APPLN. INFO.: JP 1991-56125 19910227

AB Title repellents contain copolymers composed of polyfluoroalkyl-contg. polymerizable compds., vinyl chloride (I), and divinyl monomers and/or diallyl monomers. Thus, an aq. mixt. contg. CF₃(CF₂)₈CH₂OCOCH:CH₂ 70, I 27.5, divinylbenzene 0.5, N-methylolacrylamide 2, Emulgen 920 7, Me₂CO 60, tert-dodecylmercaptan 0.2, and V 50 0.1 part was heated 12 h at 60.degree. to give a ***latex***. A nylon taffeta finished with the ***latex*** showed soft handle initially and good water and oil repellency even after 4 washings.

EV979440227

L9 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1969:58427 CAPLUS

DOCUMENT NUMBER: 70:58427

TITLE: Polyfluoroalkyl ***acrylate*** polymers

INVENTOR(S): Katsushima, Atsuo; Hisamoto, Iwao; Fukui, Taneomi;
Kato, Takahisa; Nagai, Masayuki

PATENT ASSIGNEE(S): Daikin Kogyo Co., Ltd.

SOURCE: Jpn. Tokkyo Koho, 5 pp.

CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 43020466	B4	19680902	JP	19650212
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AB A mixt. of 21 g. mixt. of (CF₃)₂CF₂CFHC(CF₃)FCH₂O₂CCH:CH₂ and
(CF₃)₂CHCCF₂CF₃)FCH₂O₂CCH:CH₂, 4 g. CH₂:CHCO₂Pr, 200 g. H₂O, 10 g.
Me₂CO,

5 g. (CF₃)₂CF(CF₂)₄CO₂Na, and 1.4 g. K₂S₂O₈ is polymd. at 60-3.degree. for
190 min. to give 239 g. ***emulsion*** of 9.8% concn.

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L9 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1969:115861 CAPLUS

DOCUMENT NUMBER: 70:115861

TITLE: Fluorolefin polymers and copolymers

INVENTOR(S): Katsushima, Atsuo; Hisamoto, Iwao; Fukui, Taneomi;
Kato, Takahisa; Nagai, Masayuki

PATENT ASSIGNEE(S): Daikin Kogyo Co., Ltd.

SOURCE: Jpn. Tokkyo Koho, 5 pp.

CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 44001216	B4	19690120	JP	19651101
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AB Polymers and copolymers from $\text{RCH:CH}(\text{CH}_2)_n\text{O}_2\text{CCR}':\text{CH}_2$ (R is C1-10 fluoroalkyl, R' is H or Me, n is 2-10) is claimed. In an example, a mixt. of 45 g. $\text{CF}_3(\text{CF}_2)_6\text{CH:CHCH}_2\text{CH}_2\text{O}_2\text{CCH:CH}_2$, 25 g. $\text{CH}_2:\text{CMeCO}_2\text{Me}$, 500 cc.

H₂O

(free from O), 5 g. $\text{C}_7\text{F}_{15}\text{CO}_2\text{NH}_4$, and 35 g. Me_2CO is heated to 50.degree. in N with stirring, and polymn. is conducted 6 hrs. at 60-5.degree. after the addn. of 2.5 g. $\text{K}_2\text{S}_2\text{O}_8$ in 100 cc. H₂O to give the stable

emulsion (I) of 6.5 wt. %. Cotton or leather, treated with 1% concn. of I and dried at 100.degree. or 130.degree., resp., shows good H₂O repellence. Softening point of the polymer is >50.degree..

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L9 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1974:554485 CAPLUS

DOCUMENT NUMBER: 81:154485

TITLE: Water- and oil-repelling products for wet treating of
fibers

INVENTOR(S): Iwatani, Akitoshi

PATENT ASSIGNEE(S): Daikin Kogyo Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 48023684	A2	19730327	JP 1971-57824	19710730

PRIORITY APPLN. INFO.: JP 1971-57824 19710730

AB Maleic anhydride and (or) maleic acid (I) [110-16-7] are added to an aq. dispersion of a copolymer with C3-21 fluoroalkyl pendant groups derived from $\text{CH}_2:\text{CRCO}_2\text{CH}_2\text{CH}(\text{O}_2\text{CR}_1)\text{CH}_2\text{R}_2$ ($\text{R} = \text{H}$ or Me , $\text{R}_1 = \text{C}_1\text{-17 alkyl}$, $\text{R}_2 = \text{perfluoroalkyl}$) and ***acrylic*** acid, methacrylic acid, and (or) their esters to give a water- and oil-repellent agent. Thus, a nylon textile was immersed in an ***emulsion*** contg. 0.5 wt. % I and 0.5 wt. % 2-ethylhexyl methacrylate-N-methylolacrylamide-3-[7-(trifluoromethyl)perfluorooctyl]-2-acetoxypentyl ***acrylate*** copolymer [***52830-82-7***], squeezed to 50% pickup, dried 10 min at 88.deg., and heated 3 min at 140.deg.. The textile had water repellency (JIS L 1004-22) 80 and oil repellency (AATCC 118-66T) 7.

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L9 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1975:595135 CAPLUS

DOCUMENT NUMBER: 83:195135

TITLE: Treating fibers

INVENTOR(S): Katsushima, Atsuo; Hisamoto, Iwao; Soei, Taneomi;
Kato, Takahisa; Nagai, Masayuki; Iwaya, Akitoshi

PATENT ASSIGNEE(S): Daikin Kogyo Co., Ltd.

SOURCE: Jpn. Tokkyo Koho, 6 pp.

CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 49040040	B4	19741030	JP 1972-57856	19720610
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PRIORITY APPLN. INFO.:	JP 1972-57856	19720610
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AB Fibers are treated with a liq. prepd. by mixing an aq. dispersion of a fluorine-contg. polymer contg. a C3-21 perfluoroalkyl group with an antistatic agent and a water-sol. salt to give antistatic fibers with improved water and oil repellency. Thus, a mixt. of (CF₃)₂CF(CF₂)₆CH₂CH(OH)CH₂OOCCH:CH₂ 36, N-methylolacrylamide 0.34, 2-ethylhexyl methacrylate 31.5, H₂O 45, Me₂CO 7, and 62:38 dimethyloctadecylamine-glacial acetic acid mixt. 6.4 g was stirred at room temp., heated to 40-55.degree., mixed with an aq. soln. contg. 5 g H₂O and 0.06 g HCl, heated to 58-62.degree., and stirred for 3 hr. The stable polymer [***55527-32-7***] dispersion (1 part) was mixed with a soln. of 1 part Parmax AW-2 [11121-11-2] in 20 parts H₂O and an aq. soln. contg. 0.5 part NH₄Cl [12125-02-9] in 20 parts H₂O and then dild. with H₂O to 100 parts. A Tetoror broadcloth (15 parts) was dipped into the ***emulsion*** for 3 min, squeezed to 100% pickup, dried at 80.degree. for 20 min, and then heat-treated at 150.degree. for 3 min, giving an antistatic cloth with improved water and oil repellency.

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L9 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1979:7548 CAPLUS

DOCUMENT NUMBER: 90:7548

TITLE: Water-resistant and oil-resistant textiles

INVENTOR(S): Kirimoto, Kazusuke

PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 53081799	A2	19780719	JP 1976-157402	19761228
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PRIORITY APPLN. INFO.:	JP 1976-157402	19761228
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AB Water- and oil-resistant cotton or polyester fabrics with improved hand were prepd. by mixing a poly(dimethylsiloxane) or Me H polysiloxane (I) with a polymer based on RZCO₂CR₁:CH₂, where R is a C₄-15 perfluoroalkyl group, Z is a C₁-10 alkylene, and R₁ is H or Me, and finishing the fabric with the mixt. Thus, an ***emulsion*** contg. a mixt. (A) of a 4:3:2:1 CH₂:CHCO₂(CH₂)₃(CF₂)₄CF(CF₃)₂-

CH₂:CHCO₂(CH₂)₃(CF₂)₆CF(CF₃)₂-

CH₂:CHCO₂(CH₂)₃(CF₂)₈CF(CF₃)₂-CH₂:CHCO₂(CH₂)₃(CF₂)₁₀CF(CF₃)₂ copolymer [

68508-80-5] 73, Et ***acrylate*** 25, and diacetone acrylamide 2 wt.% 100, an emulsifier 9, and C₁₈H₃₇N+Me₃Cl- 1 part and I were mixed. A polyester doeskin was immersed in the resulting mixt. to 90% pickup, dried, and heated 1 min at 170.degree. to give a smooth water- and oil-resistant fabric with A mixt. content 0.04% and I content 0.02%, whereas the hand of a fabric treated with a similar compn. without I was not smooth.

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L9 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1980:587706 CAPLUS

DOCUMENT NUMBER: 93:187706

TITLE: Oilproofing and waterproofing agents for finishing
textiles

PATENT ASSIGNEE(S): Daikin Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 55071779	A2	19800530	JP 1978-144547	19781122
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JP 63014027	B4	19880329		
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PRIORITY APPLN. INFO.: JP 1978-144547 19781122

AB Fluoropolymer compns. contg. a mixt. of a salt of RNMe₂ or RN+Me₂R₁X⁻, where R is C₈-18 alkyl, R₁ is H or C₁-3 alkyl or benzyl, and X⁻ is a neg. ion, and a nonionic emulsifier at 20-60:40-80 wt. ratio were useful for waterproofing and oilproofing of textiles. Thus, 60 parts of a compn. contg. (CF₃)₂CF(CF₂CF₂)_qCH₂CH₂O₂CCH:CH₂(q = 3, 4, 5) at 5:3:1 wt. ratio was mixed with 38 parts stearyl ***acrylate*** and 2 parts N-methylolacrylamide. An emulsifying compn. (8 parts) contg. 60% trimethylstearylammmonium chloride [112-03-8] and 40% polyethylene glycol monolauryl ether (I) [9002-92-0] was added and the mixt. was polymd. to give a polymer (II) [***75132-94-4***] ***latex***. Polyester-cotton blend (65:35) was immersed in a compn. contg. II (0.4% solids) prepd. in the presence of the emulsifying compn., squeezed, dried, and heat-treated 3 min. Resistance to water and oil was good for the treated fabric, whereas this resistance was poor for the fabric treated with a similar compn. without I.

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L# ANSWER 84 OF 104 CAPLUS COPYRIGHT 2003 ACS on STN

AN 1982:8518 CAPLUS

DN 96:8518

TI 2-Acyloxy-1,1,2,3,3-pentahydroperfluoroalkanamine ***betaines***

PA du Pont de Nemours, E. I., and Co., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 56122336	A2	19810925	JP 1981-11770	19810130
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JP 03051458	B4	19910806		
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JP 03246262	A2	19911101	JP 1990-100137	19900416
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PRAI US 1980-117670 19800201

AB The title ***betaines*** $\text{RCH}_2\text{CH}(\text{O}_2\text{CR}_1)\text{CH}_2\text{N}^+\text{R}_2\text{R}_3(\text{CH}_2)_m\text{CO}_2^-$ (R = C4-20

perfluoroalkyl ; R1 = C1-4 alkyl; R2, R3 = C1-4 alkyl, C1-4 alkenyl, or NR2R3 = N-heterocycle; m = 1-4) were prepd. For example, $\text{RCH}_2\text{CHICH}_2\text{OH}$ (R = C4-12 ***perfluoroalkyl***) were treated with NaOH and KOH and then Me2NH

[124-40-3] to give 92.4% $\text{RCH}_2\text{CH}(\text{OH})\text{CH}_2\text{NMe}_2$ (R = C4F9 4.0, C6F13 54.0, C8F17 34.4, C10F21 6.0, C12F25 1.6%) which were acetylated and treated with $\text{ClCH}_2\text{CO}_2\text{Na}$ [3926-62-3] in the presence of KI to give a ***betaine*** mixt. with surface tension 17.4, 19.3, and 36.0 dyne/cm at 0.1, 0.01, and 0.001% concn. in aq. solns., resp.

IC C07C101-12; C07D295-14; C11D001-90

DT ***Patent***

LA Japanese

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